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Method of growing compound semiconductor

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Inventor(s):
OHORI TATSUYA (JP)

Applicant(s):
FUJITSU LTD (JP)

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Abstract

A first monocrystalline group III-V compound semiconductor layer is formed on an Si substrate. The surface of the first monocrystalline group III-V compound semiconductor layer is polished. A second monocrystalline group III-V compound semiconductor layer is grown on the polished surface by a metal organic chemical vapor deposition, by using as a group III source material at least partially a source material of group III atoms bonded to ethyl radical at the initial stage of growth, and thereafter by using as the group III source material a source material of group III atoms bonded to methyl radical. A grown layer with a flat surface can be obtained. The surface flatness can be improved further by adding In as a group III element.